English translation of the amended sheets of International Preliminary Examination Report
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CLAIMS

Sub C2

1. Method for producing insulating materials having improved resistance to thermal ageing, characterized in that it comprises the steps consisting of:

- dissolving at least one conducting polymer having maximum purity in an organic solvent, so as to form an impregnating solution,
- impregnating granules, formed of an insulating polymer or of a mixture of insulating polymers, with said impregnating solution,
- evaporating the solvent so as to obtain granules of insulating polymer coated with a conducting ~~polymer,~~
- drying said granules,
- extruding or hot mixing said granules to form a homogeneous mixture.

in which the conducting polymer represents 10 to 5000 ppm of insulating polymer.

2. Production method according to claim 1, characterized in that the impregnation of the granules is made by dipping the latter in the impregnating solution.

3. Production method according to claim 1, characterized in that the insulating polymer is chosen from among the thermoplastic resins such as the acrylic, styrene, vinyl or cellulose resins, or from among polyolefins, fluorine-containing polymers, polyethers, polyimides, polycarbonates, polyurethanes, silicons, their copolymers or mixtures between homopolymers and copolymers.

Sub C2 cont.

4. Production method according to claim 1, characterized in that the insulating polymer is chosen from among polyethylene, low density polyethylene, high density polyethylene, linear low density polyethylene, polypropylene, ethylene-propylenediene monomer, fluorine-containing polyvinylidene, ethylene butacrylate or the copolymers of ethylene and vinyl acetate, either alone or in a mixture.

5. Production method according to claim 1, characterized in that the insulating polymer is chosen from among the thermosetting resins such as polyesters, epoxy resins or phenol resins.

6. Production method according to claim 1, characterized in that the conducting polymer has a conductivity of at least approximately 10^{-9}S.cm^{-1}.

7. Production method according to claim 6, characterized in that the conducting polymer is a simple conducting polymer, a conducting polymer grafted onto an insulating polymer, or a copolymer containing at least one conjugate system.

8. Production method according to claim 6, characterized in that the conducting polymer is chosen from among polythiophene, the polyalkylthiophenes, polyaniline, polypyrrole, polyacetylene, polyparaphenylene, their derivatives or their mixtures.

9. Material obtained with the method according to any of claims 1 to 8.

Sub C2 Cont.

10. Use of the insulating material having improved thermal resistance obtained with the method according to any of claims 1 to 8, for the manufacture of high and/or very high voltage cables.

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